JVC

SERVICE MANUAL

20" COLOR TV

C-2030(US)
C-1429
C-1489

BASIC CHASSIS
FY III'

INFORMATION

In accordance with the production form change of the PARTS No. have been changed.
Therefore,we issued an amended PARTS LIST and STANDARD CIRCUIT DIAGRAM.
Please use the new PARTS LIST and STANDARD CIRCUIT DIAGRAM together with the existing original manual(No.50380 Mar. 1990)

sign & specification subject to change without notice.

No.50380B
May 1991

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF US JVC CORP.

East Coast Region	: 107 Little Falls Road, Fairfield, New Jersey 07006	(201)808-9279
Mid West Region	: 2250 Lively Blvd., Elk Grove, Illinois 60007	(708)364-0880
South West Region	: 407 Garden Oaks Blvd., Houston, Texas 77018	(713)694-3331
West Coast Region	: 5665 Corporate Avenue, Cypress, California 90630	(714)229-8011
South East Region	: 1500 Lakes Parkway, Lawrenceville, Georgia 30243	(404)339-2522
Hawaii	: 2969 Mapunapuna Place, Honolulu, Hawaii 96819	(808)833-5828

JVC
Service & Engineering Company of America
Corporate Office
107 Little Falls Road
FairField, New Jersey 07006
201-808-2100

C-2030(USH)
Printed in Japan
91 05 V.P.
MH

PARTS LIST

CAUTION

- The parts marked ⚠ are very important for the safety. When replacing these parts, be sure to use specified ones to secure the safety and performance.
- The module circuit board is supplied together with the assembly, but the parts which do not have the drawing in this Parts List, P. C. Board Ass'y and the Parts No. columns of which are filled with lines —— , will not be supplied.
- As a rule, the resistors and capacitors which are indicated as shown in (NOTE 2) "HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS" are not shown in the list of the parts on the board.
  When ordering the service parts, confirm the resistance/rated power, capacitance/rated voltage, and type of the parts, then order by the part No. indicated according to (NOTE 2).

(NOTE 1) ABBREVIATIONS OF RESISTORS, CAPACITORS AND TOLERANCES

RESISTORS		CAPACITORS	
C R	Carbon Resistor	C CAP.	Ceramic Capacitor
F R	Fusible Resistor	E CAP.	Electrolytic Capacitor
P R	Plate Resistor	M CAP.	Mylar Capacitor
V R	Variable Resistor	HV CAP.	High Voltage Capacitor
HV R	High Voltage Resistor	MF CAP.	Metalized Film Capacitor
MF R	Metal Film Resistor	MM CAP.	Metalized Mylar Capacitor
MG R	Metal Glazed Resistor	MP CAP.	Metalized Polystyrol Capacitor
MP R	Metal Plate Resistor	PP CAP.	Polypropylene Capacitor
OM R	Metal Oxide Film Resistor	PS CAP.	Polystyrol Capacitor
CMF R	Coating Metal Film Resistor	TF CAP.	Thin Film Capacitor
UNF R	Non-Flammable Resistor	MPP CAP.	Metalized Polypropylene Capacitor
CH V R	Chip Variable Resistor	TAN. CAP.	Tantalum Capacitor
CH MG R	Chip Metal Glazed Resistor	CH C CAP.	Chip Ceramic Capacitor
COMP. R	Composition Resistor	BP E CAP.	Bi-Polar Electrolytic Capacitor
LPTC R	Linear Positive Temperature Coefficient Resistor	CH AL E CAP.	Chip Aluminum Electrolytic Capacitor
		CH AL BP CAP.	Chip Aluminum Bi-Polar Capacitor
		CH TAN. E CAP.	Chip Tantalum Electrolytic Capacitor
		CH AL BP E CAP.	Chip Tantalum Bi-Polar Electrolytic Capacitor

TOLERANCES

F	G	J	K	M	N	R	H	Z	P
±1%	±2%	±5%	±10%	±20%	±30%	+30% -10%	+50% -10%	+80% -20%	+100% -0%

(NOTE 2) HOW TO EXPRESS PARTS NUMBERS OF STANDARD PARTS

■ RESISTOR

Q R □ □ □ □ □ — ○ ○ ○

Kind / Rated Power / Shape / Tolerance / Resistance

Symbol	Part Name
C	COMP.R
D	C R
S	CH MG R

Symbol	Rated Power
0 1	1 w
1 2	1/2 w
1 4	1/4 w
1 6	1/6 w
1 8	1/8 w

Symbol	Shape
1	Straight lead
8	Chip

Indicate with first two-figure expressed by Ω and following 0.
please note that,in case of resistance less than 10 Ω, a letter "R" will be effective as point.
EX.
2.2 Ω = 2R2
470 Ω = 47×10^1 → 471
150kΩ = 15×10^4 → 154

■ CAPACITOR

Q □ □ □ □ □ □ — ○ ○ ○

Kind / Shape / Rated Voltage / Tolerance / Capacitance

Symbol	Part Name
CS	C CAP.
CS	CH C CAP.
ET	E CAP.
FM	M CAP.

6Figure \ 5Figure	0	1	2
A		10V	100V
C		16V	160V
D			200V
E		25V	250V
H		50V	500V
J	6.3V	63V	
V		35V	

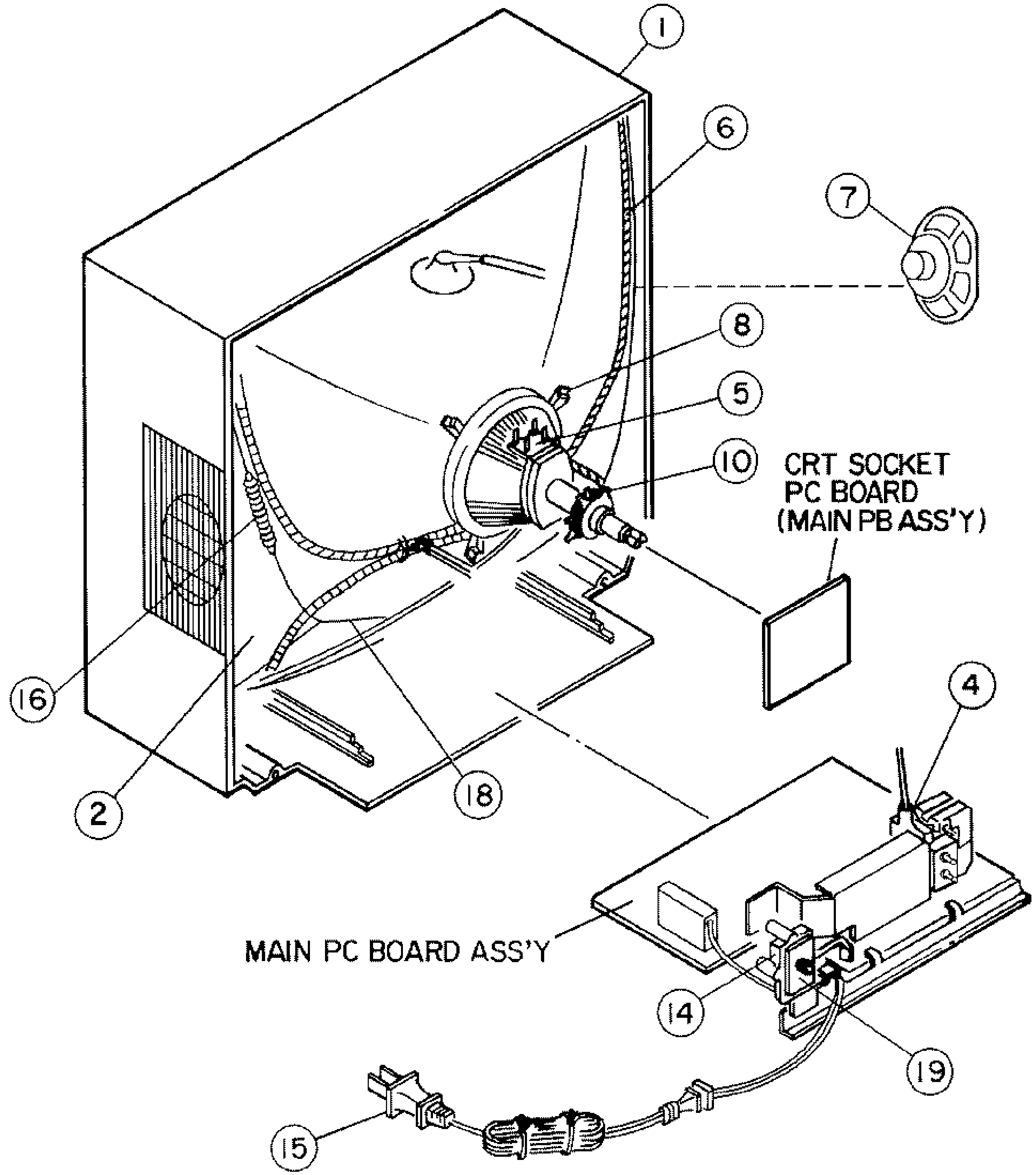
Indicate with first two-figure expressed by pF and following 0.
Please note that,in case of capacitance less than 10 pF a letter "R" will be effective as point.
EX
5pF = 5R0
1000pF = 10×10^2 → 102
47μF = 47×10^6 → 476

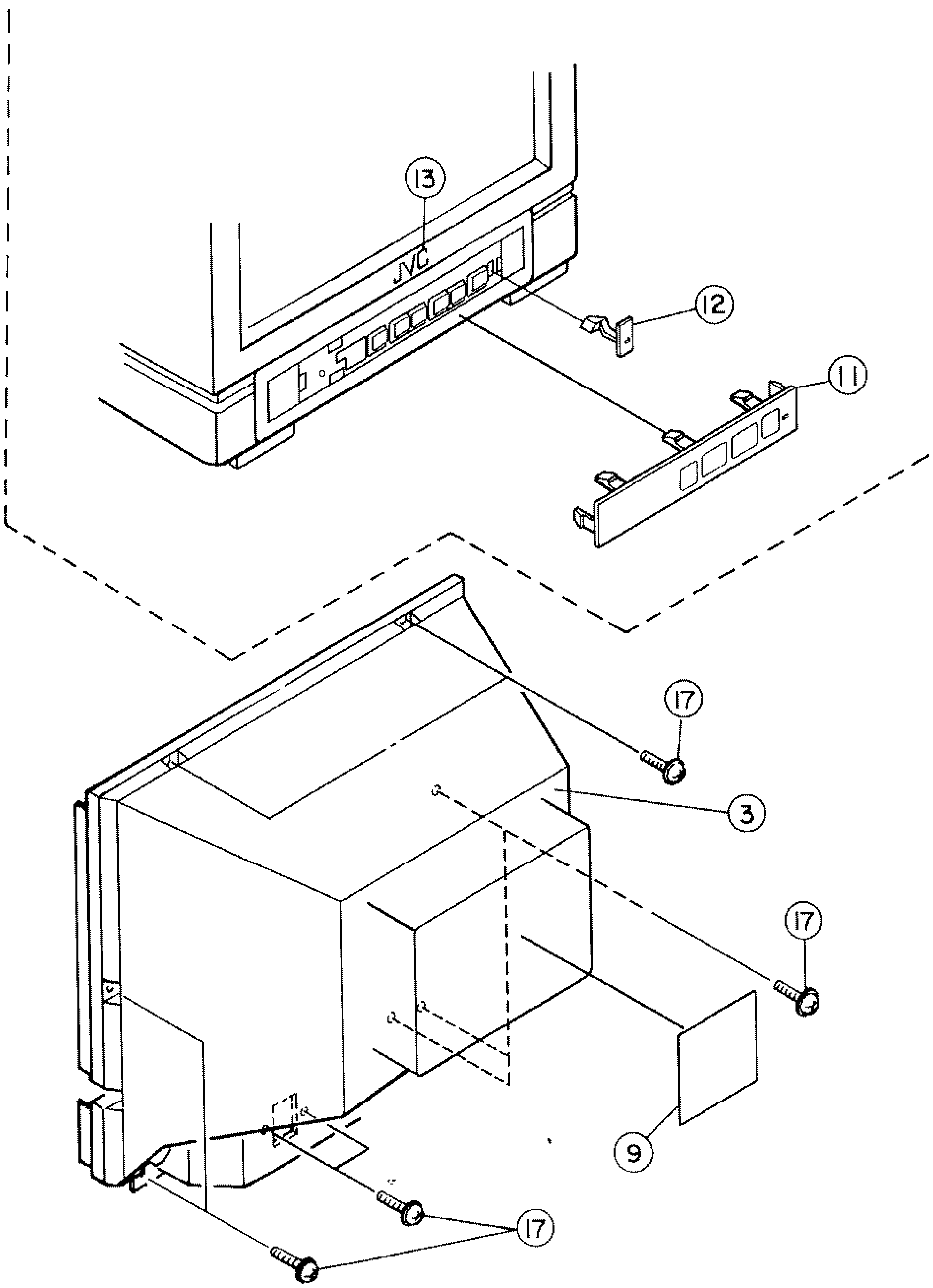
Symbol	Shape
1	Straight lead
1	Leads in the same direction
8	Chip
A	Leads in the same direction (compact part)

EXPLODED VIEW PARTS LIST

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	1	CM11715-00C-MH	FRONT CABINET AS	
⚠	2	A51JFC80X (Y)	PICTURE TUBE	V01
	3	CM11717-001-MH	REAR COVER	
⚠	4	CE41803-00A-KD	FLYBACK TRANSF.	T1522
⚠	5	CE20174-A0AKJ1	DEF. YOKE ASSY	DY01
⚠	6	CE41259-00DJ2	DEGAUSSING COIL	L01
	7	CEBSN12D-02KJ3	CONE SPEAKER	SP01
	8	CE40764-00A	WEDGE ASSY	×3
	9	CM21980-001-H	RATING LABEL	
	10	A75034-B	P&C MAGNET	
	11	CM21978-A01-V0	ORNAMENT PLATE	
	12	CM46093-A01	LED MIRROR	
	13	CM43094-002	JVC MARK	
⚠	14	CE41849-150A	ANT SHIELD BOX	
⚠	15	QMP14B0-220J3	POWER CORD	
	16	A48457	SPRING	
	17	GBSB40162-H	W TAP SCREW	×9
	18	CH43338-00A	BRAIDED ASSY	
	19	CM34127-001-VH	ANT TER BASE	

EXPLODED VIEW





PRINTED CIRCUIT BOARD PARTS LIST

MAIN PC BOARD ASS'Y (SX-1223A(H3))

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	VARIABLE R			
	R1112	QVPE610-202H	VR (NOISE)	2KΩ B
	R1246	QVPE610-202H	VR (SUB BRIGHT)	2KΩ B
	R1249	QVPE610-103H	VR (SUB PICTURE)	10KΩ B
	R1354	QVPE805-502H	VR (B CUT OFF)	5KΩ B
	R1355	QVPE805-502H	VR (G CUT OFF)	5KΩ B
	R1356	QVPE805-502H	VR (R CUT OFF)	5KΩ B
	R1361	QVPE805-201H	VR (G DRIVE)	200 Ω B
	R1362	QVPE805-201H	VR (R DRIVE)	200 Ω B
	R1428	QVPE610-102H	VR (V. HEIGHT)	1KΩ B
	RESISTOR			
⚠	RB1507	CJ39520-00Q	RESISTOR ARRAY	
	R1108	QRZ0075-560YJ2	C R	56 Ω 1/2W J
	R1201	QRZ0075-330YJ2	C R	33 Ω 1/2W J
	R1217	QRZ0075-391YJ2	C R	390 Ω 1/2W J
	R1218	QRZ0075-472YJ2	C R	4. 7kΩ 1/2W J
⚠	R1363	QRG029J-153A	OM R	15kΩ 2W J
⚠	R1364	QRG029J-153A	OM R	15kΩ 2W J
⚠	R1365	QRG029J-153A	OM R	15kΩ 2W J
⚠	R1366	QRC121K-332Z	COMP. R	3. 3kΩ 1/2W K
⚠	R1367	QRC121K-332Z	COMP. R	3. 3kΩ 1/2W K
⚠	R1368	QRC121K-332Z	COMP. R	3. 3kΩ 1/2W K
	R1422	QRZ0075-561YJ2	C R	560 Ω 1/2W J
	R1423	QRZ0075-122YJ2	C R	1. 2kΩ 1/2W J
	R1426	QRX019J-3R3S	MF R	3. 3 Ω 1W J
⚠	R1505	QRD161J-103YJ2	C R	10kΩ 1/6W J
⚠	R1508	QRZ0075-100YJ2	C R	10 Ω 1/2W J
⚠	R1521	QRG029J-273A	OM R	27kΩ 2W J
	R1524	QRZ0075-562YJ2	C R	5. 6kΩ 1/2W J
⚠	R1525	QRZ0082-682	OM R	6. 8KΩ 3W J
⚠	R1526	QRZ0081-153	OM R	15KΩ 2W J
	R1527	QRZ0081-153	OM R	15KΩ 2W J
⚠	R1528	QRG029J-391A	OM R	390 Ω 2W J
⚠	R1532	QRD129J-3R9SJ2	C R	3. 9 Ω 1/2W J
⚠	R1533	QRX039J-3R3A	MF R	3. 3 Ω 3W J
⚠	R1534	QRX039J-3R9A	MF R	3. 9 Ω 3W J
⚠	R1536	QRD149J-1R0SJ2	C R	1. 0 Ω 1/4W J
⚠	R1537	QRZ0075-121YJ2	C R	120 Ω 1/2W J
⚠	R1539	QRG039J-561A	OM R	560 Ω 3W J
⚠	R1541	QRZ0075-274YJ2	C R	270kΩ 1/2W J
⚠	R1542	QRZ0075-224YJ2	C R	220kΩ 1/2W J
	R1628	QRZ0075-4R7YJ2	C R	4. 7 Ω 1/2W J
⚠	R1791	QRG019J-471S	OM R	470 Ω 1W J
⚠	R1792	QRG029J-561A	OM R	560 Ω 2W J
⚠	R1793	QRZ0080-152	UNF. R	1. 5KΩ 5W J
⚠	R1794	QRG029J-182A	OM R	1. 8kΩ 2W J
⚠	R1795	QRG029J-562A	OM R	5. 6kΩ 2W J
⚠	R1796	QRZ0075-474YJ2	C R	470kΩ 1/2W J
	R1824	QRG029J-183A	OM R	18kΩ 2W J
⚠	R1901	QRF074K-1R8J5	UNF R	1. 8 Ω 7W K
⚠	R1902	QRD161J-221YJ2	C R	220 Ω 1/6W J
⚠	R1903	QRX039J-2R7A	MF R	2. 7 Ω 3W J
⚠	R1904	QRZ0075-103YJ2	C R	10kΩ 1/2W J
⚠	R1905	QRD161J-224YJ2	C R	220kΩ 1/6W J
⚠	R1906	QRF204J-161J5	UNF R	160 Ω 20W J
	CAPACITOR			
	C1108	QEC01HM-224MZ	E CAP.	0. 22μF 50V M
	C1110	QCT25CH-101ZJ5	C CAP.	100pF 50V J
	C1111	QCT25CH-820ZJ5	C CAP.	82pF 50V J

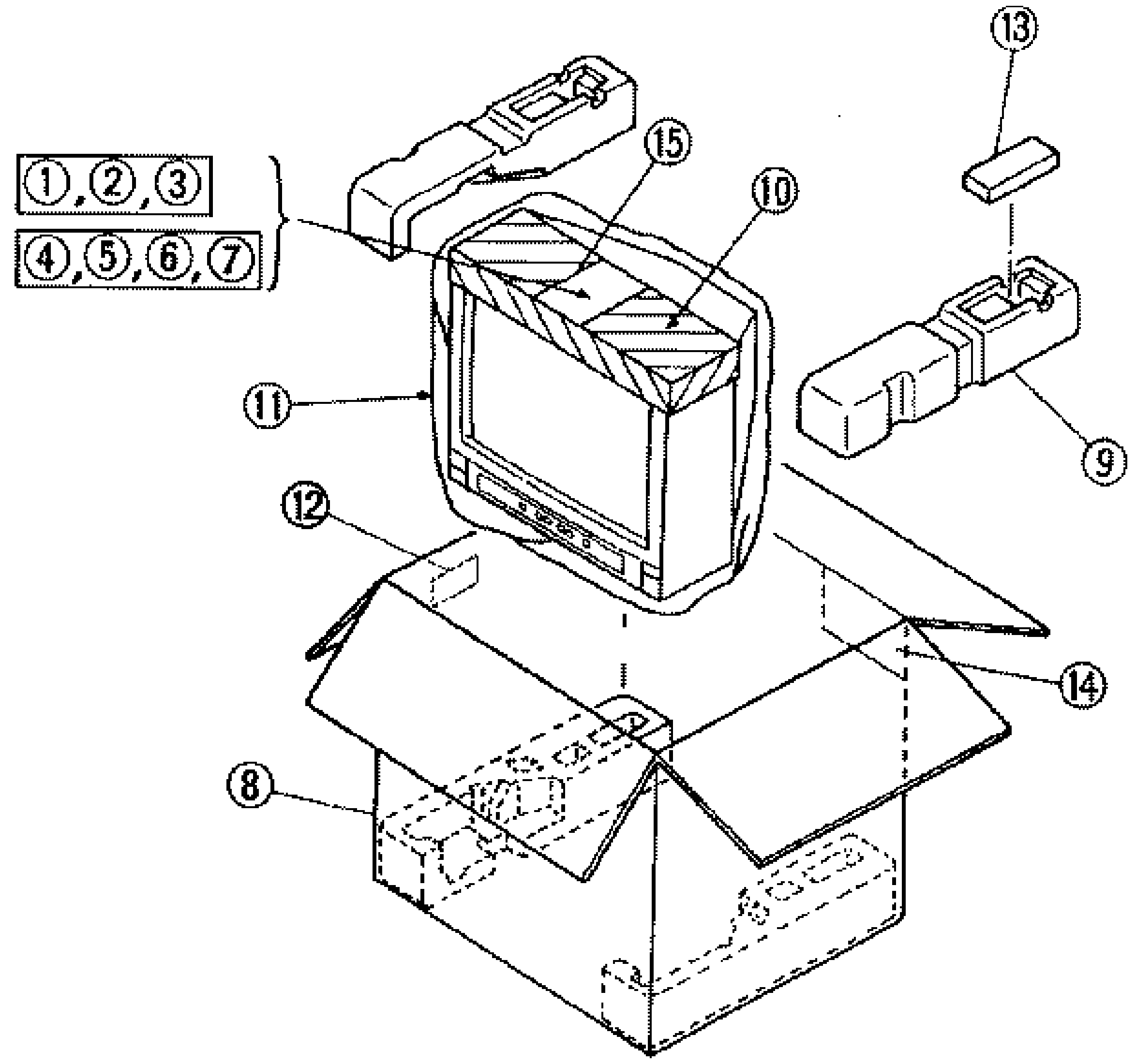
	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	CAPACITOR			
	C1205	QEM61EK-106MZ	E CAP.	10μF 25V K
	C1214	QFZ0083-683MZ	M CAP.	0.068μF 50V K
	C1303	QEN61HM-225ZJ3	BP E CAP.	2.2μF 50V M
	C1306	QFM71HK-103MZ	M CAP.	0.01μF 50V K
	C1307	QFZ0083-563MZ	M CAP.	0.056μF
	C1357	QCZ0121-102A	C CAP.	1000pF 3KV P
	C1401	QEM61HK-225MZ	E CAP.	2.2μF 50V K
	C1421	QFN31HK-682ZJ1	M CAP.	6800pF 50V K
⚠	C1423	QETC1VM-107ZJ5	E CAP.	100μF 35V M
	C1426	QFV71HJ-564MZ	TF CAP.	0.56μF 50V J
	C1504	QFN31HK-332ZJ1	M CAP.	3300pF 50V K
⚠	C1508	QETC1VM-107ZJ5	E CAP.	100μF 35V M
⚠	C1510	QFK52AK-224M	MM CAP.	0.22μF 100V K
	C1523	QFN32DK-103J1	M CAP.	0.01μF 200V K
⚠	C1524	QFZ0081-6801S	MPP CAP.	6800pF 1600V ±3%
⚠	C1526	QFZ0089-354M	MPP CAP.	0.35μF 200V J
⚠	C1527	QCZ0115-331A	C CAP.	330pF 2KV K
⚠	C1528	QCY32HK-561AZ	C CAP.	560pF 500V K
⚠	C1529	QCY32HK-102AZ	C CAP.	1000pF 500V K
⚠	C1530	QCY32HK-102AZ	C CAP.	1000pF 500V K
⚠	C1533	QETB1VM-228J3	E CAP.	2200μF 35V M
⚠	C1534	QETB1EM-108J3	E CAP.	1000μF 25V M
⚠	C1536	QET52ER-106	E CAP.	10μF 250V R
⚠	C1542	QFN32DK-473J1	M CAP.	0.047μF 200V K
⚠	C1544	QCY32HK-561AZ	C CAP.	560pF 500V K
	C1606	QFN31HK-392ZJ1	M CAP.	3900pF 50V K
	C1622	QEN61HM-105ZJ3	BP E CAP.	1μF 50V M
	C1700	QEB61HM-104MZ	E CAP.	0.1μF 50V M
	C1707	QFN31HK-222ZJ1	M CAP.	2200pF 50V K
	C1718	QCNB42M-101M	CAP. BLOCK	
	C1732	QFV81HJ-224M	TF CAP.	0.22μF 50V J
⚠	C1791	QET52ER-475	E CAP.	4.7μF 250V R
⚠	C1792	QETB2CM-336	E CAP.	33μF 160V M
⚠	C1901	QCZ9025-472A	C CAP.	4700pFAC125V Z
⚠	C1902	QCZ9025-472A	C CAP.	4700pFAC125V Z
⚠	C1903	QCZ9025-472A	C CAP.	4700pFAC125V Z
⚠	C1904	QEZ0110-567R	E CAP.	560μF 200V M
⚠	C1905	QET52ER-106	E CAP.	10μF・250V R
⚠	C1906	QFZ9025-104M	MF CAP.	0.1μFAC125V M
⚠	C1907	QFZ9025-473M	MF CAP.	0.047μFAC125V M
⚠	C1908	QET52CR-107	E CAP.	100μF 160V R
	TRANSFORMER			
	T1103	A75588-B-T	AFC TRANSF.	
	T1104	CELT004-201J1	C. W. TRANSF.	
	T1301	CELT030-001J1	3.58 BP TRANSF.	
⚠	T1521	CEX40133-001J1	HOR DRIVE TRANSF	
	T1601	CELT013-101J1	TAKE-OFF TRANSF.	
	T1602	CELT005-101J1	S. I. F. TRANSF.	
	COIL			
	L1101	CE40143-R47J1	PEAKING COIL	0.47μH
	L1102	A76186-1.0Z-T	PEAKING COIL	1.0μH
	L1103	A76186-15Z-T	PEAKING COIL	15μH
	L1201	CE40547-470J1	PEAKING COIL	47μH
	L1301	A76186-2.2Z-T	PEAKING COIL	2.2μH
⚠	L1351	A04725-180-T	PEAKING COIL	180μH
⚠	L1352	CJ30030-028	CHOKE COIL	
	L1521	A76186-56Z-T	PEAKING COIL	56μH

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	COIL			
⚠	L1523	CE41807-00B	H. LIN. COIL	
	L1524	CE41169-002	PEAKING COIL	
	L1525	CE41169-002	PEAKING COIL	
	L1702	CE40041-220ZJ1	PEAKING COIL	22μH
	L1703	CELP017-4R7Y	PEAKING COIL	4.7μH
	L1704	CELP017-4R7Y	PEAKING COIL	4.7μH
	L1705	CELP017-4R7Y	PEAKING COIL	4.7μH
	L1706	CELP017-4R7Y	PEAKING COIL	4.7μH
	L1707	CELP017-4R7Y	PEAKING COIL	4.7μH
	L1708	A76186-2.2Z-T	PEAKING COIL	2.2μH
	L1831	A76186-1.0Z-T	PEAKING COIL	1.0μH
	DIODE			
	D1102	RD8.2ES (B1) -T2	ZENER DIODE	
	D1103	1SS133-T2	SI. DIODE	
	D1104	1SS133-T2	SI. DIODE	
	D1201	RD7.5E (B3)	ZENER DIODE	
	D1202	1SS133-T2	SI. DIODE	
	D1203	MA4150 (L) -T2	ZENER DIODE	
	D1204	1SS133-T2	SI. DIODE	
	D1205	1SS133-T2	SI. DIODE	
	D1207	1SS133-T2	SI. DIODE	
	D1208	1SS133-T2	SI. DIODE	
	D1209	1SS133-T2	SI. DIODE	
	D1210	1SS133-T2	SI. DIODE	
	D1301	1SS133-T2	SI. DIODE	
	D1302	1SS133-T2	SI. DIODE	
	D1303	1SS133-T2	SI. DIODE	
	D1304	1SS133-T2	SI. DIODE	
	D1305	1SS133-T2	SI. DIODE	
	D1306	1SS133-T2	SI. DIODE	
	D1401	1SS133-T2	SI. DIODE	
⚠	D1421	1SR35-100-T3	SI. DIODE	
⚠	D1422	05AZ7.5-T5	ZENER DIODE	
	D1501	MA4068 (L) -T2	ZENER DIODE	
	D1502	MA4091 (M) -T2	ZENER DIODE	
⚠	D1503	MA4068 (N) C1-T2	ZENER DIODE	
⚠	D1504	1SS81-T2	SI. DIODE	
⚠	D1532	RGP10J-T3	SI. DIODE	
⚠	D1533	RGP10J-T3	SI. DIODE	
⚠	D1534	RGP10J-T3	SI. DIODE	
⚠	D1536	RH1S-T3	SI. DIODE	
	D1537	1SS81-T2	SI. DIODE	
	D1702	1SS133-T2	SI. DIODE	
	D1703	1SS133-T2	SI. DIODE	
	D1704	1SS133-T2	SI. DIODE	
	D1705	1SS133-T2	SI. DIODE	
	D1706	1SS133-T2	SI. DIODE	
	D1710	1SS133-T2	SI. DIODE	
	D1711	1SS133-T2	SI. DIODE	
	D1712	1SS133-T2	SI. DIODE	
	D1713	1SS133-T2	SI. DIODE	
	D1714	GL-5HD23	L. E. D.	Power Indicator
	D1716	MA4056 (M) -T2	ZENER DIODE	
	D1718	1SS133-T2	SI. DIODE	
	D1719	1SS133-T2	SI. DIODE	
	D1721	1SS133-T2	SI. DIODE	
	D1722	1SS133-T2	SI. DIODE	
	D1723	1SS133-T2	SI. DIODE	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
DIODE			
D1724	1SS133-T2	SI. DIODE	
D1725	1SS133-T2	SI. DIODE	
D1726	MA4068 (L)	ZENER DIODE	
⚠ D1791	1SS146-T2	SI. DIODE	
⚠ D1792	1SS146-T2	SI. DIODE	
⚠ D1793	1S1887A-T3	SI. DIODE	
D1794	MA4062 (M) -T2	ZENER DIODE	
D1795	1SS133-T2	SI. DIODE	
D1796	1SS133-T2	SI. DIODE	
D1797	1SS133-T2	SI. DIODE	
D1831	1SS133-T2	SI. DIODE	
D1841	MA4330 (M) -T2	ZENER DIODE	
⚠ D1901	1S1887A-T3	SI. DIODE	
⚠ D1902	1S1887A-T3	SI. DIODE	
⚠ D1903	1S1887A-T3	SI. DIODE	
⚠ D1904	1S1887A-T3	SI. DIODE	
⚠ D1905	1S1887A-T3	SI. DIODE	
TRANSISTOR			
Q1101	2SC1906-T	SI. TRANSISTOR	
Q1102	2SA933S (QR) -T	SI. TRANSISTOR	
Q1103	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1201	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1202	2SA933S (QR) -T	SI. TRANSISTOR	
Q1204	2SC1740S (QR) -T	SI. TRANSISTOR	
⚠ Q1351	2SC3271 (NP) -CI	SI. TRNSISITOR	B. Out
⚠ Q1352	2SC3271 (NP) -CI	SI. TRNSISITOR	G. Out
⚠ Q1353	2SC3271 (NP) -CI	SI. TRNSISITOR	R. Out
Q1521	2SC2482 (CI) -T	SI. TRANSISTOR	
⚠ Q1522	2SD1554-LB	SI. TRANSISTOR	H. Out
Q1701	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1702	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1704	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1705	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1706	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1707	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1708	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1709	2SC1740S (QR) -T	SI. TRANSISTOR	
Q1710	2SC1740S (QR) -T	SI. TRANSISTOR	
⚠ Q1791	2SC2073	SI. TRANSISTOR	
Q1792	2SC3271 (NP)	SI. TRNSISITOR	
IC			
IC1101	M51496P	I. C. (M)	
⚠ IC1201	TA8601BNV	I. C.	
IC1301	AN5352N	I. C. (M)	
⚠ IC1421	UPC1488H	I. C.	
IC1621	AN5265	I. C. (M)	
IC1701	MN152121JMT3	I. C. (M)	
IC1702	MN1280-K	I. C. (M)	
IC1801	TA78L005AP-Y	I. C. (H)	
IC1831	MN12C201D	I. C. (M)	
IC1841	GP1U721Q	IFR DETEGT UNIT	
⚠ IC1901	STR30130-A	I. C.	
OTHERS			
⚠	CE41602-001	CRT SOCKET	
CF1101	CE41505-001	CERAMIC TRAP	
CF1501	CSB503F17	C. RESONATOR	
CF1601	A74603-C	CERAMIC FILTER	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
OTHERS			
CF1701	CSA4. 00MS3	CELAMIC FILTER	
DL1201	CE41108-001J1	DELAY LINE	
⚠ F1901	QMF66U1-5R0S	FUSE	5. 0A
⚠ F1902	QMF53U1-1R25S	FUSE	1. 25A
⚠ LF1901	CE41506-00BJ1	LINE FILTER	
⚠ RY1901	CESK017-001J1	RELAY	
SF1101	CE41706-201	SAW FILTER	
S1201	QSL4A13-C02	LEVER SWITCH	Service SW
S1701	QSP4H11-C02	PUSH SWITCH	Function
S1702	QSP4H11-C02	PUSH SWITCH	Down
S1703	QSP4H11-C02	PUSH SWITCH	UP
S1704	QSP4H11-C02	PUSH SWITCH	Power
S1705	QSP4H11-C02	PUSH SWITCH	Vol△
S1706	QSP4H11-C02	PUSH SWITCH	Vol▽
⚠ TH1901	CE40595-001T	POSI. THERMISTOR	
⚠ TU1701	AN3181EL-B01	TUNER	TU1701
X1301	CE40668-001J1	CRYSTAL	

PACKING



PACKING PARTS LIST

SYMBOL NO.	PART NO.	PART NAME	REMARKS
1	CM31850-00A-T	ROD ANTENNA	
2	20102030USIBAH	INST. BOOK	
3	CE41447-001	UV MIXER	
4	BT-20108A-H	SERVICE INF CARD	
5	BT-20113-H	WARRANTY CARD	
6	CM21229-004-H	SAFETY TIPS	
7	CM34549-A0A-T	UHF LOOP ANT.	
8	CP10974-003-H	PACKING CASE	
9	CP10924-00A-H	CUSHION ASSY	4pcs in 1set
10	CP30544-001-H	TOP COVER	
11	CP30545-001-H	SET COVER	
12	CP30664-004 (R)	POS LABEL	
13	RM-C423-KD-T	REMOCON	
14	CM22029-00A-H	REC KEEPING CARD	
15	QPGA025-04005H	POLY BAG	

C-2030(US) STANDARD CIRCUIT DIAGRAM

■NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2.SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1)Input signal :Color bar signal

(2)Setting positions of each knob/button and variable resistor :Original setting position when shipped

(3)Internal resistance of tester :DC 20kΩ/V

(4)Oscilloscope sweeping time :H ⇒20μS/div
:V ⇒5mS/div
:Others ⇒ Sweeping time is specified

(5)Voltage values :All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3.INDICATION OF PARTS SYMBOL[EXAMPLE]

- In the PW board :R1209→R209

4.INDICATIONS ON THE CIRCUIT DIAGRAM

(1)Resistors

- Resistance value
  - No unit :[Ω]
  - K :[KΩ]
  - M :[MΩ]
- Rated allowable power
  - No indication :1/6[W]
  - Others :As specified
- Type
  - No indication :Carbon resistor
  - OMR :Oxide metal film resistor
  - MFR :Metal film resistor
  - MPR :Metal plate resistor
  - UNFR :Uninflammable resistor
  - FR :Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2)Capacitors

- Capacitance value
  - 1or higher :[pF]
  - less than 1 :[μF]
- Withstand voltage
  - No indication :DC50[V]
  - Others :DC withstand voltage[V]
  - AC indicated :AC withstand voltage[V]

* Electrolytic Capacitors
47/50[Example]:Capacitance value[μF]/withstand voltage[V]

- Type
  - No indication :Ceramic capacitor
  - MY :Mylar capacitor
  - MM :Metalized mylar capacitor
  - PP :Polypropylene capacitor
  - MPP :Metalized polypropylene capacitor
  - MF :Metalized film capacitor
  - TF :Thin film capacitor
  - BP :Bipolar electrolytic capacitor
  - TAN :Tantalum capacitor

(3)Coils

- No unit :[μH]
- Others :As specified

(4)Power Supply

- ▬▬▬ :B1(129.3V)
- ▬ ▬ ▬ :B2(12V)
- ▬□▬□ :9V
- □□□□ :5V

* Respective voltage values are indicated.

(5)Test Point

- ⦿ : Test point
- ○ : Only test point display

(6)Connecting method

- □ : Connector
- ○ : Wrapping or soldering
- →≻— —≻|— : Receptacle

(7)Ground symbol

⊥ : LIVE (Primary) side ground

5.NOTE FOR REPAIRING SERVICE

USE ISOLATION TRANSFORMER BECAUSE THIS PRODUCT IS A HOT CHASSIS !

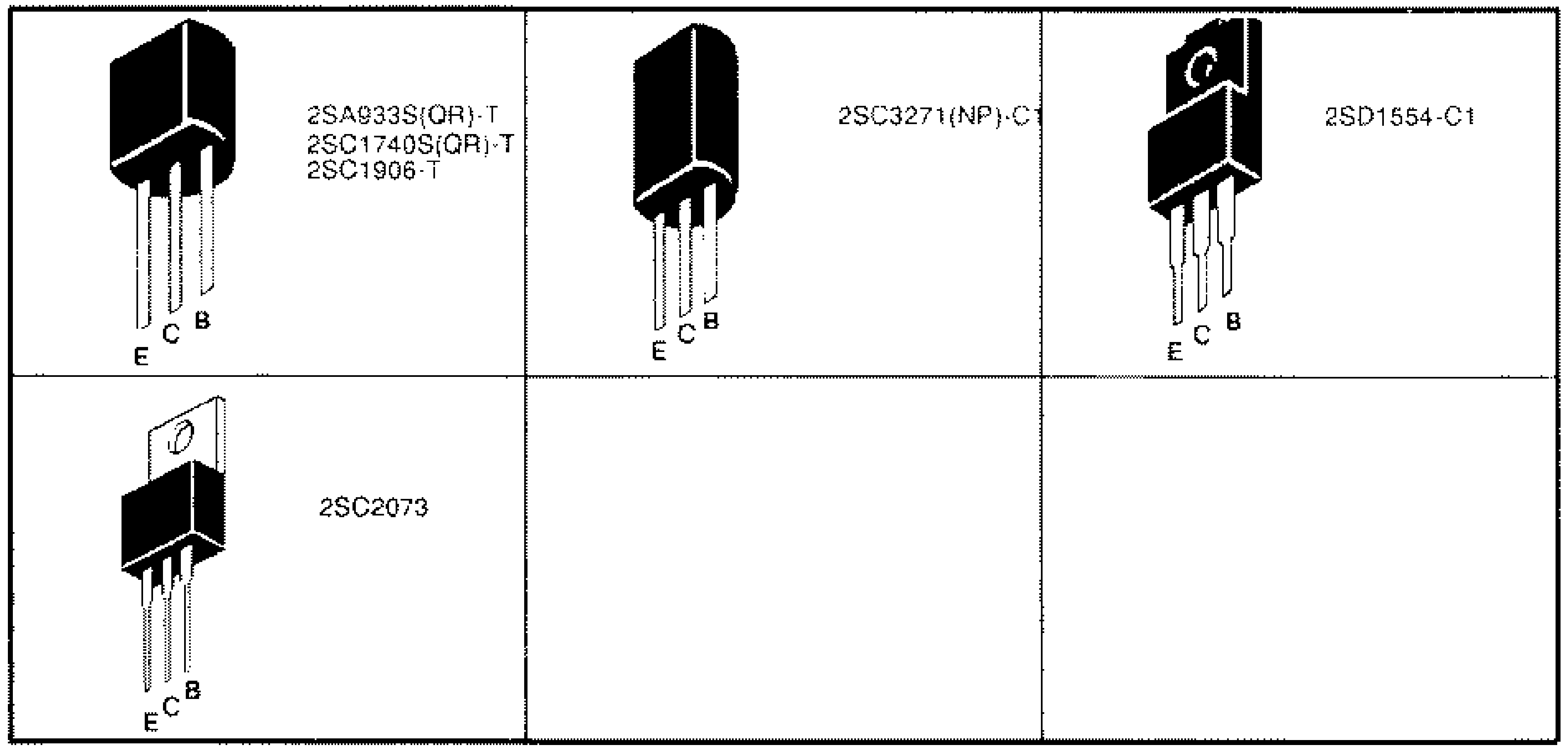
Whenever any service on this product is performed, AC power of the product should be supplied through an adequate capacity isolation transformer whose power supply cord is connected to the wall outlet.

If the above precaution is not respected, an electric shock may be caused when you touched the chassis with the hand.

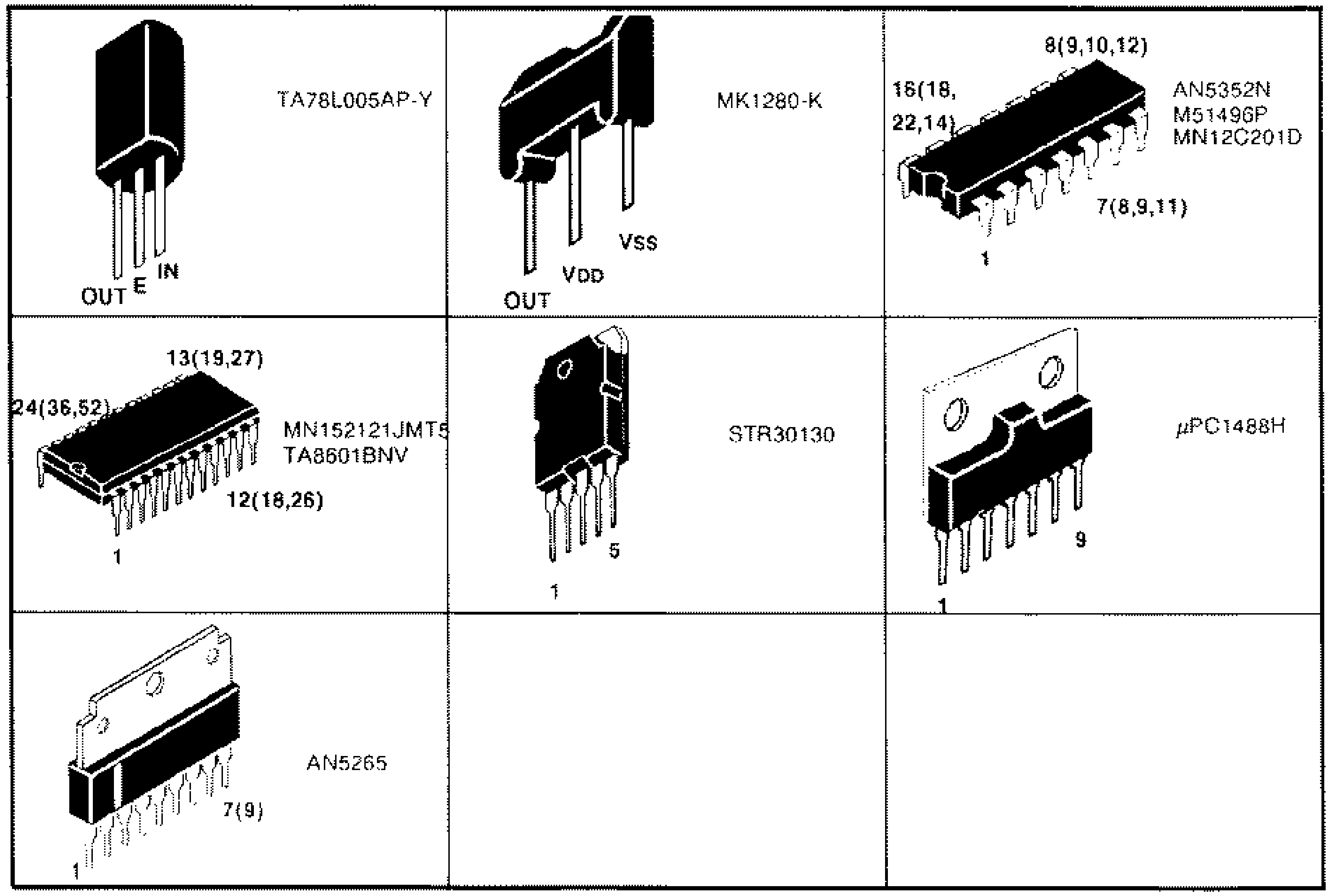
◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

SEMICONDUCTOR SHAPES

TRANSISTORS

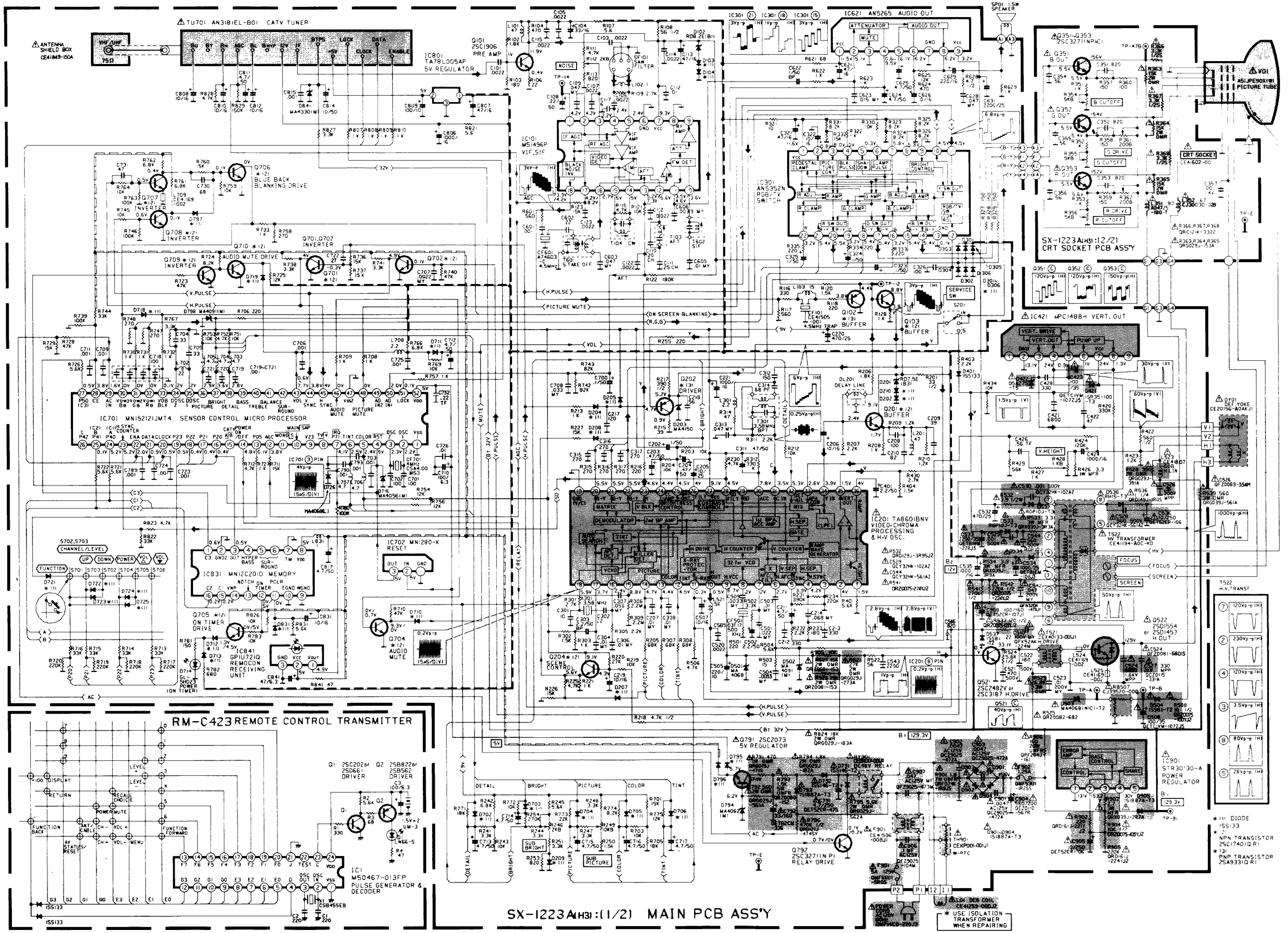


ICs

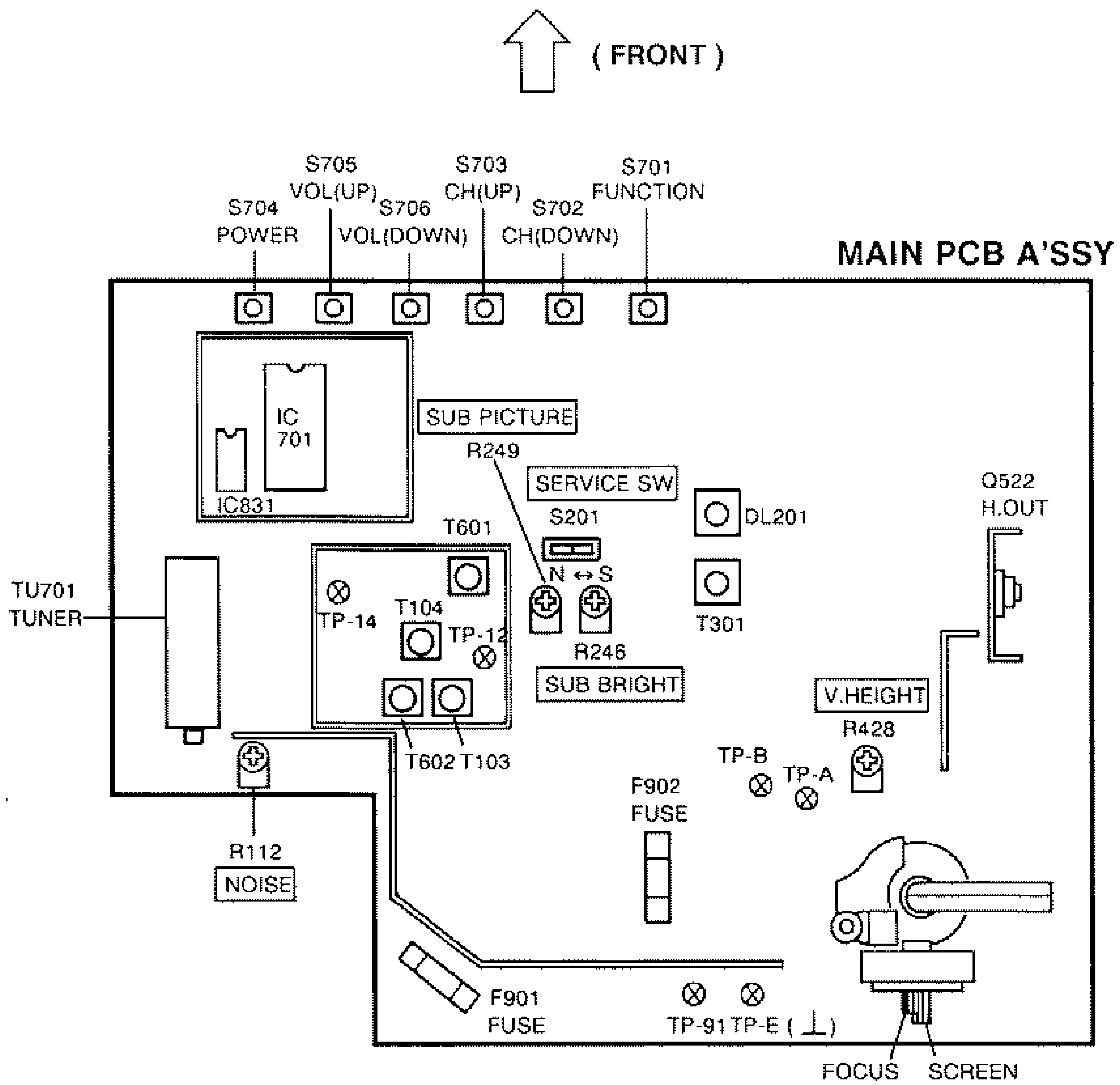


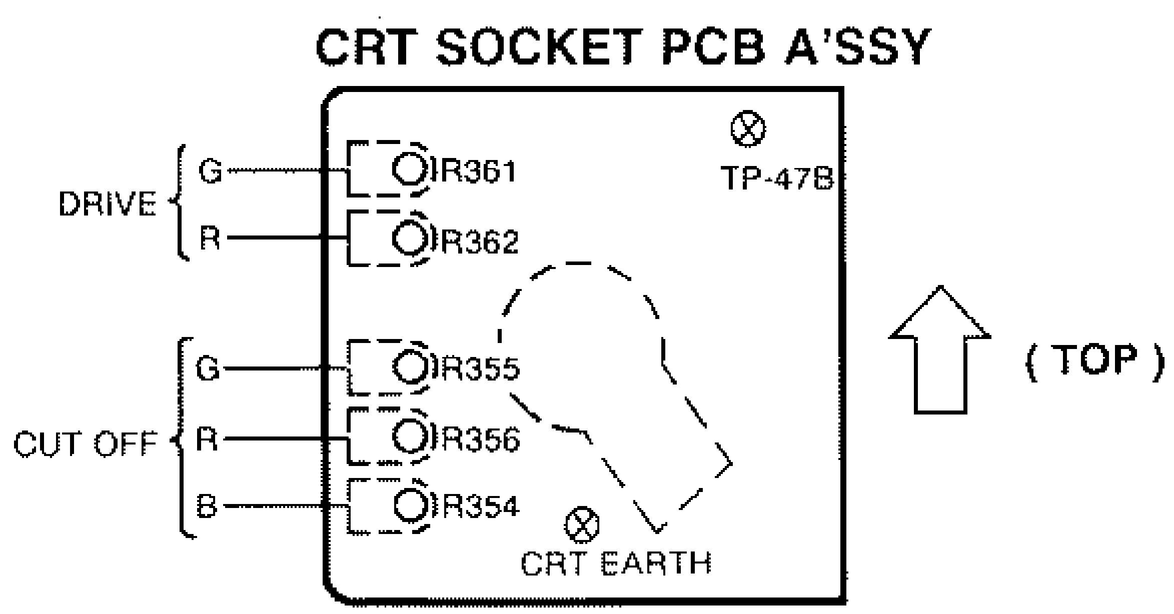
CIRCUIT DIAGRAMS AND PCB PATTERNS

MAIN PCB,CRT SOCKET PCB,REMOTE CONTROL TRANSMITTER CIRCUIT DIAGRAMS



MAINPARTS LOCATION AND ALIGNMENTS LOCATION





CHANNNEL CHART

MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
○	○	VL		02	I
				03	
				04	
				05	
				06	
		VH		07	II
				08	
				09	
				10	
				11	
				12	
				13	
×	○	MID	A	14	I
			B	15	
			C	16	II
			D	17	
			E	18	
			F	19	
			G	20	
			H	21	
			I	22	
		SUPER	J	23	
			K	24	
			L	25	
			M	26	
			N	27	
			O	28	
			P	29	
			Q	30	
			R	31	
			S	32	
			T	33	
			U	34	
			V	35	
			W	36	
			W + 1	37	
			W + 2	38	
			W + 3	39	
			W + 4	40	
			W + 5	41	
			W + 6	42	
			W + 7	43	
			W + 8	44	
			W + 9	45	
			W + 10	46	
			W + 11	47	
		HYPER	W + 12	48	IV
			W + 13	49	
			W + 14	50	
			W + 15	51	
			W + 16	52	
			W + 17	53	
			W + 18	54	
			W + 19	55	
			W + 20	56	
			W + 21	57	
			W + 22	58	
			W + 23	59	
			W + 24	60	
			W + 25	61	
			W + 26	62	
			W + 27	63	
			W + 28	64	
		ULTRA	W + 29	65	
			W + 30	66	
			W + 31	67	
			W + 32	68	
			W + 33	69	
			W + 34	70	
			W + 35	71	

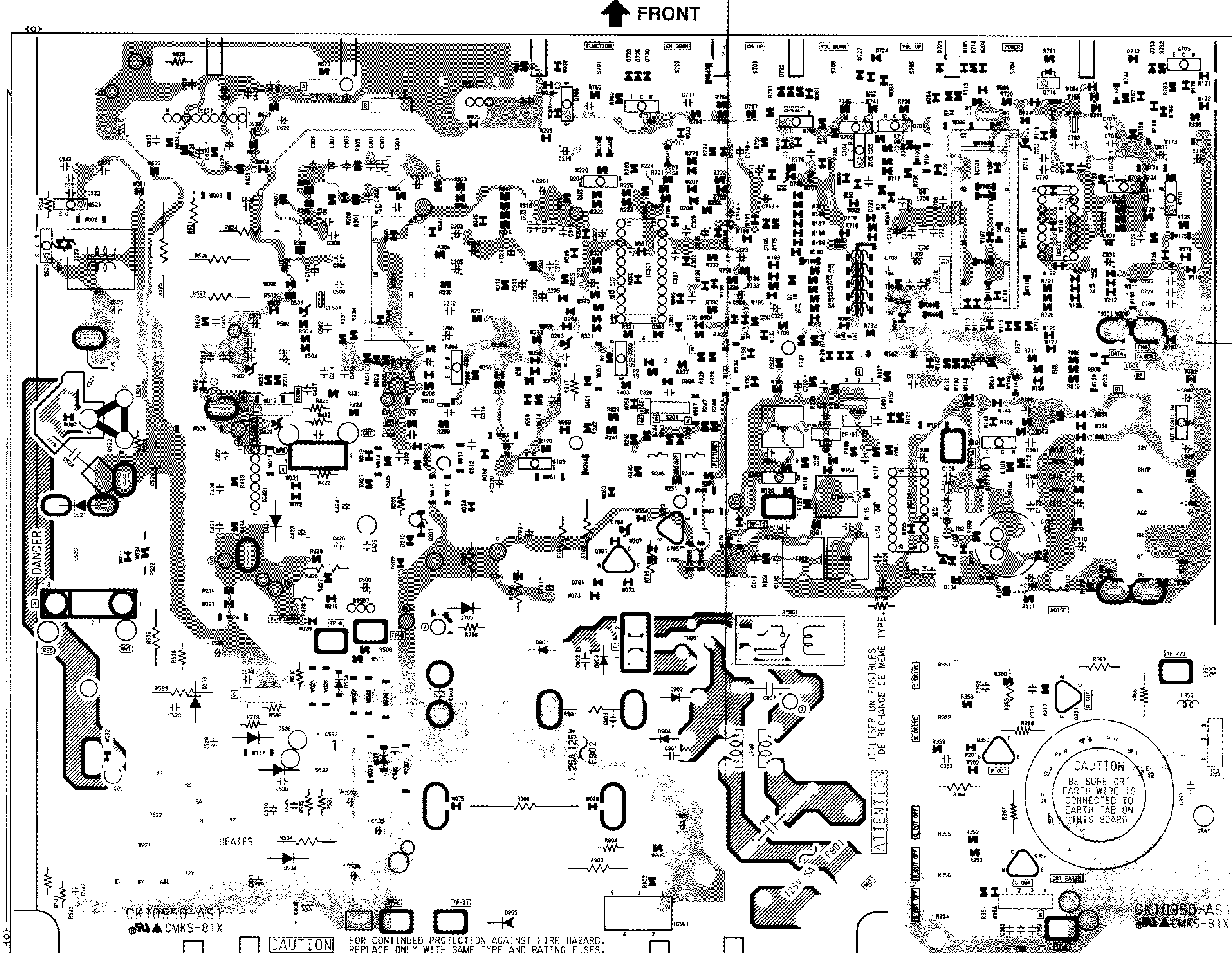
MODE TV	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISP.	TUNER BAND
×	○	ULTRA	W + 35	71	IV
			W + 36	72	
			W + 37	73	
			W + 38	74	
			W + 39	75	
			W + 40	76	
			W + 41	77	
			W + 42	78	
			W + 43	79	
			W + 44	80	
			W + 45	81	
			W + 46	82	
			W + 47	83	
			W + 48	84	
			W + 49	85	
			W + 50	86	
			W + 51	87	
			W + 52	88	
			W + 53	89	
			W + 54	90	
			W + 55	91	
			W + 56	92	
			W + 57	93	
			W + 58	94	
			W + 59	100	
			W + 60	101	
			W + 61	102	
			W + 62	103	
			W + 63	104	
			W + 64	105	
			W + 65	106	
			W + 66	107	
			W + 67	108	
			W + 68	109	
			W + 69	110	
			W + 70	111	
			W + 71	112	
			W + 72	113	
			W + 73	114	
			W + 74	115	
			W + 75	116	
			W + 76	117	
			W + 77	118	
			W + 78	119	
			W + 79	120	
			W + 80	121	
			W + 81	122	
			W + 82	123	
			W + 83	124	
			W + 84	125	
		SUB MID	A-8	01	I
			A-4	96	
			A-3	97	
			A-2	98	
			A-1	99	
○	×	UHF	14 ∫ 69		IV


TOTAL 180CH
{ VHF 124CH
{ UHF 56CH


NOTE:
TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIED.

MAIN PCB / CRT SOCKET PCB PATTERNS


[SX-1223A(H3)]



TU701 CEEK2E1-A04-T CATV. TUNER
ANTENNA TERMINAL
VHF/UHF
75Ω
BTPS
CLOCK
DATA
ENABLE
+5V
IC801 TA78L005A 5V REGULA
R829 150K
C811 4.7/25
C815 .001
D841 MA4330(M)
C814 10/50
C809 100/10
C806 1000/16
R827 3.3K
R807 1K
R808 1K
R809 1K
R810 1K
33V用
R733 1K
R758 270
Q701,Q702 INVERTER
Q710 *(2)
Q709 *(2) INVERTER
AUDIO MUTE DRIVE
R724 8.2K
R723 47K
D719
R725 12K
R738 3.3K
R736 15K
R737 4.7K
R741 3.3K
Q701 (2)
Q702 *(2)
C707 .0022 MY
R740 47K
D798 MA4091(M)
R716 220
R739 100K
R744 33K
R748 270
R767
R747 270
C704 33
C705 33
R753 10K
R752 4.7K
R751 10K
D729 MA4051 (M)
C711 .001
C709 .001
R726 1K
R730 1K
R731 1K
C718 100
R732 1K
L702 22
L705 4.7
L704 4.7
L703 4.7
C721
C720
C719
C719~C721 .001
C706 .001
R709 1K
R708 1K
L708 2.2
R766 6.8K
D711 *(1)
C712 4.7/25
C725 .001
R769 12K
R757 1K
IC701 MN152121JGQ SENSOR CONTROL MICRO PROCESSOR
IC701 ③ PIN
4Vp-p
15uS/DIV
R722 1K
R721 1K
C789 .001
C724 .001
C729 .001
R712 4.7K
R727 1K
R711 15K
C790 .001
C793 .001
C703 .001
L707 4.7
L706 4.7
CF701 4MHz CSA4.00 MG3
C702 100
C701 100
C723 .01
C710 100/10
D716 MA4056(M)
R754 12K
R756 12K
D750 *(1)
R823 4.7K
R822 33K
S702, S703
CHANNEL/LEVEL
UP
DOWN
POWER
VOL
FUNCTION
S701
S703
S702
S704
S705
S706
D721 *(1)
D722 *(1)
D723 *(1)
D724 *(1)
D725 *(1)
IC831 MN12C201D MEMORY
L831 1.0
C817 4.7/25
C831 10/16
D831 *(1)
R831 5.6K
IC702 MN1280-K RESET
OUT
IN
GND
R710 47K
D710 *(1)
Q704 *(2) AUDIO MUTE
0.2Vp-p
50S/DIV
IC841 GH3091 REMOCON RECEIVING UNIT
GND
Vcc
Vout
47/6.3
R841 47
R716 33K
R715 33K
R714 33K
R713 33K
R720 220K
R719 220K
R718 220K
R717 220K
P20
P21
P22
P23
AC


SPEAKER
GND
Vcc
12.0V
Q351~Q353
2SC3271(NP)-C)
TP-47B
R366 3.3K 1/2S
Q351 B.OUT
156V
C351 820
5.5V
C354 56
R351 1K
R357 150
R360 100
R354 5KB
B CUTOFF
R363 15K 2W OMR
R367 3.3K 1/2S
VQ1
PICTURE TUBE
Q352 G OUT
154V
C352 820
R358 150
R361 200B
R364 15K 2W OMR
G DRIVE
G CUTOFF
R355 5KB
R368 3.3K 1/2S
CRT SOCKET
CE41748-001
Q353 R OUT
152V
C353 820
R365 15K 2W OMR
C356 56
R359 150
R362 200B
R353 1K
C357 .001 1KV
L351 180
L352 70
CJ30030-070
R356 5KB
R DRIVE
R CUTOFF
TP-E
CRT SOCKET PCB ASS'Y
6.8Vp-p
R630 22 2W
BRIGHT CONTROL
Y SW OUT
B ADJ.
B AMP
B CLAMP
RGB/TV SW CONTROL
R SW OUT
B-Y
G-Y
R-Y
R327 150
R328 150
R329 150
D301
D302
D303
D304
D305
D306
D301~D306
SERVICE SW
S201
Q103
BUFFER
Q351 (C)
120Vp-p (H)
Q352 (C)
120Vp-p (H)
Q353 (C)
150Vp-p (H)
IC421 μPC1488H VERT. OUT
VERT DRIVE
VERT. OUT
PUMP UP
GND
Vcc
13.4V
24V
0.8V
1V
24V
1.3V
30Vp-p (V)
R403 330
D401 1SS133
C423 100 /35
C428 330
D421 1SR35-100 -T3
C421 6800
C422 47
1.5Vp-p (V)
R420 330K
C405 120
60Vp-p (V)
C429 .039
DY01 DEF. YOKE
CE20105-B0AKJ1
R424 120K
C426 .56 TF
R431 56K
C427 .015 MY
V.HEIGHT
R428 1KB
C424 1000/16
R422 560 1/2
R432 150
R429 56K
R427 1K
R426 3.3 1W MFR
V1
V2
H1
H3
T522 HV TRANSF.
120Vp-p (H)
230Vp-p (H)
120Vp-p (H)
3.5Vp-p (H)
80Vp-p (H)
28Vp-p (H)
C526 47 200V MPP
R539 560 3W OMR
D536 RH1S
R536
C528 560 500V
C536 10/250
1000Vp-p (H)
TA8601BNV CHROMA
D533 RGP10J
R533 3.3 3W MFR
C533 2200/35
C529 .001 500V
C544 560 500V
T522 HV TRANSFORMER
CE41233-A0C-K
HV
D534 RGP10J
FOCUS
SCREEN
B2
12V
C535 1000 /16
R534 3.9 3W MFR
C534 1000/25
R541 330K 1/2
R542 220K 1/2
C542 .047 200V MY
50Vp-p (H)
C908 100/160
C546 560
C545 .22 TF
D537 1SS81
Q522 2SD1554 or 2SD1426 H.OUT
T521 CEX401 H.DRIVE
129V
C524 OFZ0081-6201S
R524 5.6K 1/2
C522 180
L524 41169
C521 470 500V
C524 6200 1.6KV MPP
C527 330 1.6KV MPP
L525 CE41169
Q521 2SC2482V or 2SC3187 H.DRIVE
R525 6.8K 3W OMR
TP-A
RB507 CJ39520-00X
TP-B
IC201 (8) PIN
0.2Vp-p (H)
2.8Vp-p (V)
IC901 STR50130A POWER REGULATOR
ERROR AMP
POWER DRIVE
POWER OUT
131V
300V
131V
D911 DFA1A4
C920 .001
R921
*(1) DIODE 1SS133
*(2) NPN TRANSISTOR 2SC1740(QR)
*(3) PNP TRANSISTOR 2SA933(QR)



IC301 (21) 3Vp-p (H)
IC301 (18) 1Vp-p (H)
IC301 (15) 3Vp-p (H)
IC621 AN5
ATTENUATO
MUTE
Q101 2SC1906 PRE AMP
78L005AP REGULATOR
NOISE
TP-14
SF101 SAW FILTER
IC101 M51496P VIF,SIF
IF AGC
RF AGC
VIF AMP
VIDEO DET.
BLACK NOISE INV.
LIM
AFT
FM DET.
ATT.
RF AMP
GND
Vcc
AGC
CF601 A74603 -C-T 4.5MHz
T601 S.TAKE OFF
T104 CW
T103 AFT
T602 SIF
H.PULSE
PICTURE MUTE
ON SCREEN BLANKING
R.G.B
VOL
9V
IC301 AN5352N RGB/TV SWITCH
PEDESTAL CLAMP
PIC-TURE CONT.
BLK. PULSE
SHA-DOW
R ADJ.
R AMP
G AMP
R CLAMP
G CLAMP
R SW OUT
G SW OUT
CF101 TPS4.5MC
4.5MHz TRAP
Q102 *(3) BUFFER
Q202 *(3) DRIVER
DL201 DELAY LINE
T301 3.58MHz BPT
6Vp-p (H)
0.25Vp-p (H)
DETAIL
BRIGHT
PICTURE
COLOR
TINT
MATRIX
V.BLK
BRIGHTNESS CONTROL
CONTRAST CONTROL
DEMODULATOR
2nd BP AMP
1st BPA ACC AMP
MIX
H.SEP
GATE
ILPRI
TINT
AUTO SEARCH
APC DET.
KILLER DET.
VCXO
H.DRIVE
H COUNTER
V.COUNTER
RAMP WAVE GENERATOR
X-RAY PROTEC-TOR
32f H VCO
V.SEP
H.SEP
HEIGHT
IC201 VIDEO PROCE &H-V
X301 3.58 MHz
Q204 *(2) SCENE CONTROL
CF501 503F17 500KHz
D501 MA4068
D502 MA4091
2.8Vp-p
RELAY


LINE FILTER PCB ASSY
SX-9138B-P10/1MS SX-9138C-P10/1MS
IC901 STR50130A POWER REGULATOR
ERROR AMP
POWER DRIVE
POWER OUT
T522 HV TRANSFORMER CE41233-A0C-K
Q522 2SD1554 or 2SD1426 H.OUT
Q521 2SC2482V or 2SC3187 H.DRIVE
T521 CEX40133-001J1 H.DRIVE
T901 SW REACTOR CE41477-00B
Q901 2SC1815 (B) RECT SWITCH
Q902 2SC3271(NP) RELAY DRIVE
RY901 CESK017-0C/J1 DC48V RELAY
Q791 2SC2073 5V REGULATOR
Q903 2SC1274 4V B. SWITCH
Q904 2SA1... B1 SWITCH
Q905 2SC2229 (Y) B SWITCH
B1 130.0V
STAND BY POWER(130V)
H DRIVE
H COUNTER
V COUNTER
RAMP WAVE GENERATOR
32 fH VCO
V.SEP
H.SEP
X-RAY PROTECTOR
H PULSE
V.PULSE
FOCUS
SCREEN
HV
IC201 (6) PIN
POWER CORD AC90V~260V 50/60Hz QMP1620-200J1
*(1) DIODE 1SS133
*(2) NPN TRANSISTOR 2SC1740(QR)
*(3) PNP TRANSISTOR 2SA933(QR)


RM-C320 REMOTE CONTROL TRANSMITTER
IC1 M50467-013FP PULSE GENERATOR & DECODER
Q1 2SC2020 or 2SD661 DRIVER
Q2 2SB822 or 2SB562 DRIVER
D1 LN66-5
IC801 MN12C201D MEMORY
IC702 MN1280-K RESET
IC841 GP3091 REMOCON. RECEIVING UNIT
Q704 AUDIO MUTE
Q204 SCENE CONTROL
S702, S709
CHANNEL/LEVEL
FUNCTION
UP
DOWN
POWER
DETAIL
BRIGHT
PICTURE
COLOR
TINT
SUB BRIGHT
SUB PICTURE
AUTO SEARCH
APC DET
KILLER DET.
VCXO
DEMODULATOR
MATRIX
V.BLK
BRIGHTNESS CONTROL
RELAY
MAIN PCB ASS'Y (1/2)
SX-1222C-P/O, SX-1222C-IMS
SX-1222B-P/O, SX-1222B-IMS